

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in this application:

Listing of Claims:

Claims 1-9 (canceled)

Claim 10 (new). A chemical vapor deposition system using a liquid reactant and a carrier gas, comprising:

a chemical vapor deposition chamber having a gas inlet port, and

a liquid reactant vaporizer having an outlet port connected to said chamber inlet port, said vaporizer comprising:

a valve body having a first aperture, a second aperture, and a third aperture;

a valve seat;

a gas inlet port for receiving said carrier gas, said gas inlet port connected to said first aperture through a first fluid channel;

a liquid inlet port for receiving the liquid reactant, said liquid inlet port connected to said second aperture through a second fluid channel;

a valve mechanism including a valve element disposed adjacent to said valve seat and forming a valve region, said valve seat being continuously adjustable by said valve mechanism over a continuous range of settings between and including a fully closed position and a fully open position so as to variably control the flow rate of the fluid; and

an outlet port connected to said third aperture through a third fluid channel.

Claim 11 (new). A chemical vapor deposition system using a liquid reactant and a carrier gas, comprising:

a chemical vapor deposition chamber having a gas inlet port, and

a liquid reactant vaporizer having an outlet port connected to said chamber inlet port, said vaporizer comprising:

a valve body having a first aperture, a second aperture, and a third aperture;

a valve seat;

a gas inlet port for receiving said carrier gas, said gas inlet port connected to said first aperture through a first fluid channel;

a liquid inlet port for receiving the liquid reactant, said liquid inlet port connected to said second aperture through a second fluid channel;

a valve mechanism including a valve element disposed adjacent to said valve seat and forming a valve region, said valve seat being continuously adjustable by said valve mechanism over a continuous range of settings between and including a fully closed position and a fully open position so as to variably control the flow rate of the fluid; and

the outlet port is connected to said third aperture through a third fluid channel,

the valve body defining a first volume in adjustable, fluid communication with a second volume through the valve seat wherein during normal operation the pressure in the first volume is different than the pressure in the second volume.

Claim 12 (new). A method for vaporizing a liquid and mixing the vaporized liquid with a carrier gas, the method comprising:

- a) providing a vaporizer having:
 - a valve body having a first aperture, a second aperture and a third aperture;
 - a valve seat through which fluid flows;
 - a gas inlet port for receiving said carrier gas, said gas inlet port connected to said first aperture through a first fluid channel;
 - a liquid inlet port for receiving the liquid, said liquid inlet port connected to said second aperture through a second fluid channel;
 - a valve mechanism including a valve element disposed adjacent to and opposite said valve seat, said valve element being continuously adjustable by said valve mechanism over a continuous range of settings between and including a fully closed position and a fully open position; and
 - an outlet port connected to said third aperture through a third fluid channel,
 - the valve body defining a first volume in adjustable, fluid communication with a second volume through the valve seat wherein during normal operation the pressure in the first volume is different than the pressure in the second volume;
- b) providing sources of liquid and carrier gas; and
- c) vaporizing liquid in the valve seat by operating the valve and sources such that there is a change in pressure from the liquid inlet to the vapor outlet.